

* * * * * Welcome to STN International * * * * *

<u>NEWS 1</u>		Web Page URLs for STN Seminar Schedule - N. America
<u>NEWS 2</u>		"Ask CAS" for self-help around the clock
<u>NEWS 3</u>	Feb 24	PCTGEN now available on STN
<u>NEWS 4</u>	Feb 24	TEMA now available on STN
<u>NEWS 5</u>	Feb 26	NTIS now allows simultaneous left and right truncation
<u>NEWS 6</u>	Feb 26	PCTFULL now contains images
<u>NEWS 7</u>	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
<u>NEWS 8</u>	Mar 24	PATDPAFULL now available on STN
<u>NEWS 9</u>	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
<u>NEWS 10</u>	Apr 11	Display formats in DGENE enhanced
<u>NEWS 11</u>	Apr 14	MEDLINE Reload
<u>NEWS 12</u>	Apr 17	Polymer searching in REGISTRY enhanced
<u>NEWS 13</u>	AUG 22	Indexing from 1927 to 1936 added to records in CA/CAPLUS
<u>NEWS 14</u>	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
<u>NEWS 15</u>	Apr 28	RDISCLOSURE now available on STN
<u>NEWS 16</u>	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
<u>NEWS 17</u>	May 15	MEDLINE file segment of TOXCENTER reloaded
<u>NEWS 18</u>	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
<u>NEWS 19</u>	May 19	Simultaneous left and right truncation added to WSCA
<u>NEWS 20</u>	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
<u>NEWS 21</u>	Jun 06	Simultaneous left and right truncation added to CBNB
<u>NEWS 22</u>	Jun 06	PASCAL enhanced with additional data
<u>NEWS 23</u>	Jun 20	2003 edition of the FSTA Thesaurus is now available
<u>NEWS 24</u>	Jun 25	HSDB has been reloaded
<u>NEWS 25</u>	Jul 16	Data from 1960-1976 added to RDISCLOSURE
<u>NEWS 26</u>	Jul 21	Identification of STN records implemented
<u>NEWS 27</u>	Jul 21	Polymer class term count added to REGISTRY
<u>NEWS 28</u>	Jul 22	INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
<u>NEWS 29</u>	AUG 05	New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
<u>NEWS 30</u>	AUG 13	Field Availability (/FA) field enhanced in BEILSTEIN
<u>NEWS 31</u>	AUG 15	PATDPAFULL: one FREE connect hour, per account, in September 2003
<u>NEWS 32</u>	AUG 15	PCTGEN: one FREE connect hour, per account, in September 2003
<u>NEWS 33</u>	AUG 15	RDISCLOSURE: one FREE connect hour, per account, in September 2003
<u>NEWS 34</u>	AUG 15	TEMA: one FREE connect hour, per account, in September 2003
<u>NEWS 35</u>	AUG 18	Data available for download as a PDF in RDISCLOSURE
<u>NEWS 36</u>	AUG 18	Simultaneous left and right truncation added to PASCAL
<u>NEWS 37</u>	AUG 18	FROSTI and KOSMET enhanced with Simultaneous Left and Right Truncation
<u>NEWS 38</u>	AUG 18	Simultaneous left and right truncation added to ANABSTR
<u>NEWS EXPRESS</u>	April 4	CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
<u>NEWS HOURS</u>		STN Operating Hours Plus Help Desk Availability
<u>NEWS INTER</u>		General Internet Information
<u>NEWS LOGIN</u>		Welcome Banner and News Items
<u>NEWS PHONE</u>		Direct Dial and Telecommunication Network Access to STN
<u>NEWS WWW</u>		CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 19:22:34 ON 22 AUG 2003

=> ile reg

ILE IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=>

THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE

Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

2.31

2.31

FILE 'REGISTRY' ENTERED AT 19:29:12 ON 22 AUG 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 AUG 2003 HIGHEST RN 569883-36-9

DICTIONARY FILE UPDATES: 20 AUG 2003 HIGHEST RN 569883-36-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

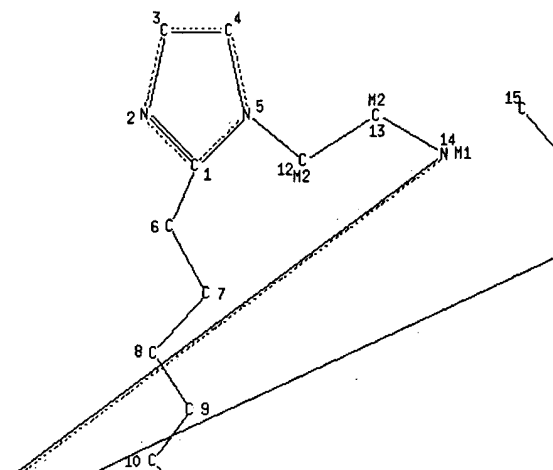
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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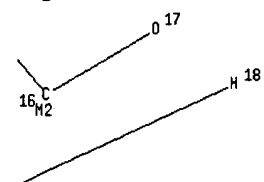
L1 STRUCTURE UPLOADED

=> dis que

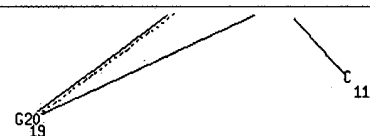
L1 STR



Page 1-A



Page 1-B



Page 2-A

REP G20=(1-10) 15-14 17-18

NODE ATTRIBUTES:

HCOUNT	IS	M2	AT	12
HCOUNT	IS	M2	AT	13
HCOUNT	IS	M1	AT	14
HCOUNT	IS	M2	AT	16
NSPEC	IS	R	AT	1
NSPEC	IS	R	AT	2
NSPEC	IS	R	AT	3
NSPEC	IS	R	AT	4
NSPEC	IS	R	AT	5
NSPEC	IS	C	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	C	AT	8
NSPEC	IS	C	AT	9
NSPEC	IS	C	AT	10
NSPEC	IS	C	AT	11
NSPEC	IS	C	AT	12
NSPEC	IS	C	AT	13
NSPEC	IS	C	AT	14
NSPEC	IS	C	AT	15
NSPEC	IS	C	AT	16
NSPEC	IS	C	AT	17
NSPEC	IS	C	AT	18
NSPEC	IS	C	AT	19

DEFAULT MLEVEL IS ATOM

MLEVEL IS CLASS AT 6 7 8 9 10 11 12 13 14 15 16 17 18

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

=> s 11

SAMPLE SEARCH INITIATED 19:29:47 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 17 TO ITERATE

100.0% PROCESSED 17 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 93 TO 587
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> search 11

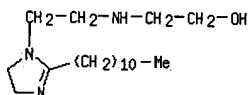
ENTER TYPE OF SEARCH (SSS), CSS, FAMILY, OR EXACT:.
ENTER SCOPE OF SEARCH (SAMPLE), FULL, RANGE, OR SUBSET:full
FULL SEARCH INITIATED 19:30:05 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 446 TO ITERATE

100.0% PROCESSED 446 ITERATIONS 6 ANSWERS
SEARCH TIME: 00.00.01

L3 6 SEA SSS FUL L1

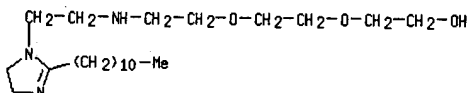
=> d 13 1-6

L3 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 181231-57-2 REGISTRY
CN Ethanol, 2-[[2-(4,5-dihydro-2-undecyl-1H-imidazol-1-yl)ethyl]amino]- (9CI)
(CA INDEX NAME)
FS 3D CONCORD
MF C18 H37 N3 O
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

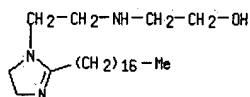
L3 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 123844-56-4 REGISTRY
CN Ethanol, 2-[2-[2-[[2-(4,5-dihydro-2-undecyl-1H-imidazol-1-yl)ethyl]amino]ethoxy]ethoxy]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C22 H45 N3 O3
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1937 TO DATE)
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

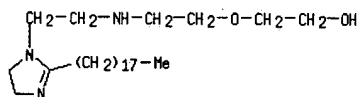
L3 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 104297-20-3 REGISTRY
CN Ethanol, 2-[[2-(2-heptadecyl-2-imidazolin-1-yl)ethyl]amino]- (6CI) (CA INDEX NAME)
FS 3D CONCORD
MF C24 H49 N3 O
SR CAOLD
LC STN Files: CA, CAOLD, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1937 TO DATE)
3 REFERENCES IN FILE CAPLUS (1937 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 66835-26-5 REGISTRY
CN Ethanol, 2-[[2-[[2-(4,5-dihydro-2-octadecyl-1H-imidazol-1-yl)ethyl]amino]ethoxy]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C27 H55 N3 O2
LC STN Files: CA, CAPLUS



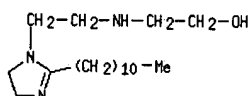
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1937 TO DATE)
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

L3 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 60918-58-3 REGISTRY
CN Oxirane, methyl-, polymer with oxirane, mono[2-[[2-(4,5-dihydro-2-undecyl-1H-imidazol-1-yl)ethyl]amino]ethyl] ether (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Oxirane, polymer with methyloxirane, mono[2-[[2-(4,5-dihydro-2-undecyl-1H-imidazol-1-yl)ethyl]amino]ethyl] ether (9CI)
MF C18 H37 N3 O . (C3 H6 O . C2 H4 O)x
PCT Polyether, Polyether formed
LC STN Files: CA, CAPLUS

CM 1

CRN 181231-57-2
CMF C18 H37 N3 O



CM 2

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 3

CRN 75-56-9
CMF C3 H6 O



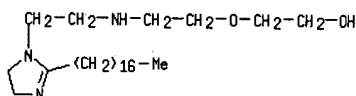
CM 4

CRN 75-21-8
CMF C2 H4 O



1 REFERENCES IN FILE CA (1937 TO DATE)
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

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L3 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2003 ACS on STN
RN 29383-41-3 REGISTRY
CN Ethanol, 2-[2-[[2-(2-heptadecylmethyl-2-imidazolin-1-
MF yl)methylethyl]amino]ethoxy]- (8CI) (CA INDEX NAME)
CI C28 H57 N3 O2
LC IDS
STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB
```



2 (D1-Me)

1 REFERENCES IN FILE CA (1937 TO DATE)
1 REFERENCES IN FILE CAPLUS (1937 TO DATE)

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
159.43	161.74

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 19:31:40 ON 22 AUG 2003
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FILE COVERS 1907 - 22 Aug 2003 VOL 139 ISS 9
FILE LAST UPDATED: 21 Aug 2003 (20030821/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s 13

L4 7 L3

=> d 14 1-7

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Citing
Text References

AN 1989:622021 CAPLUS
DN 111:222021
TI Silver halide photographic materials with improved antistatic properties
and coatability
IN Yatsuyanagi, Naoko; Taguchi, Masaaki
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01101545	A2	19890419	JP 1987-260627	19871014
PRAI	JP 1987-260627		19871014		

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Citing
Text References

AN 1978:513736 CAPLUS
DN 89:113736
TI Oil-water emulsion breaker with low solubility in water
IN Kondo, Takashi; Kawauchi, Tooru
PA Kurita Water Industries, Ltd., Japan
SO Jpn. Tokkyo Koho, 4 pp.
CODEN: JAXXAD
DT Patent
LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52003909	B4	19770131	JP 1975-32164	19750319
	JP 51107291	A2	19760922	JP 1975-32164	19750319
PRAI	JP 1975-32164		19750319		

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Citing
Text References

AN 1976:594442 CAPLUS
DN 85:194442
TI Aqueous dispersions of polyolefin fibrils
IN Engler, Peter; Oppenlaender, Knut; Stoeher, Dieter; Helfert, Herbert;
Scharpenberg, Hans G.
PA BASF A.-G., Fed. Rep. Ger.
SO Ger. Offen., 13 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2509742	A1	19760923	DE 1975-2509742	19750306
PRAI	DE 1975-2509742		19750306		

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text Citing References

AN 1970:522166 CAPLUS
DN 73:122166
TI Mixture and reaction products of lecithin and substituted imidazolines, useful as gasoline antiwear and antifilter-clogging agents
IN Thayer, Helen I.
PA Gulf Research and Development Co.
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3527584	A	19700908	US 1966-544839	19660425
PRAI	US 1966-544839		19660425		

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text Citing References

AN 1959:4350 CAPLUS
DN 53:4350
OREF 53:770i,771a-b
TI Polyepoxide-treated amine-modified thermoplastic phenol-aldehyde resins
IN De Groote, Melvin; Shen, Kwan-Ting
PA Petrolite Corp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2828276		19580325	US	

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text Citing References

AN 1956:79613 CAPLUS
DN 50:79613
OREF 50:15058h-i,15059a-b
TI Breaking petroleum emulsions
IN De Groote, Melvin
PA Petrolite Corp.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2743241		19560424	US	

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Full Text Citing References

AN 1956:67496 CAPLUS
DN 50:67496
OREF 50:12550h-i,12551a-d
TI Oxyalkylated, amine-modified, thermoplastic phenolaldehyde resins
IN De Groote, Melvin
PA Petrolite Corp.
DT Patent
LA Unavailable

FAN.CNT 1

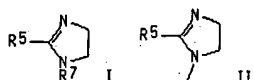
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2743251		19560424	US	

=> d 14 1-7 abs

L4 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

GI



AB Hydrophilic colloid layers and/or photosensitive emulsion layers of the title materials contain compds. of the formula $R_1R_2OP(O)OH$, $R_3R_4N(ZO)nH$, $R_3R_4NZNR_4(ZO)nH$, $R_5CONR_4ZNR_4Z(NR_4Z)xNR_4R_6$, and/or I [R1 = higher alc. group having C8-22 alkyl or alkenyl, phenolic group with C4-12 alkyl added with 1-100 mol ethylene oxide and/or propylene oxide group; R2 = OH, OR1; R3 = C8-22 alkyl or alkenyl; Z = ethylene or propylene unit; R4 = H, (ZO)nH; n = 1-50; R5 = C7-21 alkyl or alkenyl; R6 = COR5, (ZO)nH; x = 0-3; R7 = (ZO)nH, ZNR22, Z(NR4Z)yR8; y = 1-3; R8 = NR42 or II]. Thus, an emulsion layer contg. core-shell Ag halide grains with a Ag(Cl,I,Br) core and a Ag(I,Br) shell, and a gelatin protective layer contg. coating aids, a matting agent, and a compd. of the invention C16H33O(CH2CH2)20PO3H2 (III) were simultaneously formed on a PET base. The obtained film was exposed and processed to show low fog, high sensitivity, high antistatic properties relative to nylon or rubber, and very few no. of nonwetted areas in coating.

L4 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

AB $RQ(CH_2CH_2NH)lCH_2CH_2NR_1R_2$ (R = C15-19 alkyl, Q = imidazolinylenes, R1 = (CH2CH2O)mH, R2 = H or (CH2CH2O)nH, l is an integer (0-4), and m and n are integers (1-5)] are demulsifiers for oil-water systems. The emulsions are broken readily, and the amt. of the demulsifier going into the water is decreased. Thus, an emulsion of tar-water (1:2 by vol.) was treated with 400 ppm I (R = C18 alkyl, R2 = H, l = 0, and m = 2) [66835-26-5], and settled for 2 h after stirring. Water recovery was 99.0%. The boundary between the tar and the sepd. water was clear. The water did not contain any I.

L4 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

AB Polyethylene (I) [9002-88-4] fibrils for use in paper manuf. were obtained by extruding 3% I soln. in C6H12 into H2O contg. 4,5-dihydroimidazole derivs. as dispersant and distg. the solvent. Thus, a mixt. of 2.80 g I fibrils obtained by using 1-(2-hydroxyethyl)-1-methyl-2-(cis-8-heptadecenyl)-4,5-dihydroimidazolinium methyl sulfate [60875-26-5] and 1.20 g sulfite pulp (Schopper-Riegler degree 35) in 4 l. H2O was formed into web to give paper with 130 g/m2 surface wt. and 89 g initial wet strength.

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

AB Ethoxylated or propoxylated derivs. of 1,2,4- or 1,2,5-trisubstituted imidazolines or mixtures of lecithin with imidazolines are antiwear gasoline additives, according to radioactive piston-ring-wear tests in internal combustion engines.

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

GI For diagram(s), see printed CA Issue.

AB Cf. U.S. 2,771,437 (C.A. 51, 4690b). Phenol-aldehyde, resins were condensed with basic nonhydroxylated secondary polyamines and HCHO, followed by reaction with phenolic diepoxides to give products useful for breaking petroleum emulsions or as detergents, emulsifying, or wetting agents. A phenol-aldehyde resin (882 g.) (from p-Me₃CC₆H₄OH and HCHO), 600 xylene, 176 (MeNHCH₂)₂, and 200 g. of 30% HCHO were heated for 19 hrs. at 80-46° and refluxed with removal of water. The condensate 116 g. in xylene was treated at 100-60° with 17 g. (p-O.CH₂.CHCH₂OC₆H₄)₂CMe₂ (I) for 6 hrs. to give a product represented by [(Amine) CH₂ (Resin) CH₂ (Amine)]₂ DGE, where DGE is diglycidyl ether, a dark-red, viscous semisolid, insol. in H₂O, sol. in xylene:MeOH 8:2 plus 5% gluconic acid. U.S. 2,828,277 relates to use of hydroxylated polyamines, such as (HOC₂H₄NHCH₂)₂; U.S. 2,828,280 to amines, such as NH(C₂H₄OH)₂; U.S. 2,828,281 to amines, such as Et₂NH; and U.S. 2,828,282 to cyclic amidines. U.S. 2,828,283 relates to products from I and phenol-aldehyde resins and their hydroxyalkylation derivs., without amine modification.

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

AB Petroleum emulsions of the water-in-oil type are demulsified by the action of an acidic fractional ester derived by esterifying an oxyalkylated amine-modified phenol-aldehyde resin condensate with a polycarboxy acid. The polyhydroxylated reactant or reaction mixt. is obtained by combining a comparatively large proportion of an alkylene oxide, particularly ethylene or propylene oxide, with a comparatively small proportion (as high as 50:1) of the resin condensate. Thus, to 882 parts of a resin obtained from p-tert-butylphenol and HCHO and mixed and refluxed with 600 parts xylene, 612 parts 2-oleylimidazoline was added at 35° and the mixt. stirred while 162 g. 37% aq. HCHO was added in approx. 3 hrs. After 16.5 hrs. at 40-4°, the mixt. was refluxed until the odor of HCHO disappeared. A phase-sepg. trap was used for eliminating water of soln. and reaction. Part of the xylene was then removed until the temp. reached 148° and the final product was refluxed for several hrs. at 145-50°, for an over-all reaction time of approx. 30 hrs. At 125-35° and 25-35 lb./sq. in., 15.18 lb. of this resin condensate dissolved in 6 lb. xylene, with 1 lb. finely divided NaOH as catalyst, was mixed with 15.18 lb. ethylene oxide, injected in 0.75 hr., and the mixt. stirred for 15 min. The oxyalkylated deriv. was dild. with sufficient xylene, Decalin, or petroleum solvent to produce a 65% soln., and was refluxed with 1 mole of a polycarboxylated reactant, e.g. phthalic anhydride, succinic acid or anhydride, or diglycolic acid, per available OH radical until esterification was complete.

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

Citing
References

AB Phenolic resins sol. in nonoxygenated org. solvents, such as benzene or xylene, are obtained by reaction of bifunctional monohydric phenols of the general formula RC₆H₄OH with an aldehyde having 8 C atoms or less. R is an aliphatic hydrocarbon substituent located at the 2, 4, or 6 position and contg. 4-14 C atoms. These products should contain 3-6 phenolic nuclei per resin mol. These materials are made to react with HCHO and basic nonhydroxylated secondary monoamines having ≤32 C atoms in any group attached to the amino N atom. These amine-modified products are then made to react with oxides such as ethylene oxide, propylene oxide, butylene oxide, glycidol, or methylglycidol. For example, to 882 g. of a resin powder having a mol. wt. of 882.5, prepd. from p-tert-butylphenol and HCHO with an acid catalyst, an equal wt. of xylene was added. This mixt. was refluxed until the resin was dissolved. The temp. was then

adjusted to 35° and 146 g. of diethylamine was added. The mixt. was stirred vigorously and 162 g. of 37% HCHO was added in 2.5 hrs., it was refluxed, and water was removed after all the HCHO had reacted. Then, some of the xylene was removed until the temp. rose to 145°. The reactants were kept at this temp. for 4 hrs. To 10.56 lb. of the amine-modified resin in 8.8 lb. of xylene, 1 lb. powd. NaOH was added. The autoclave was brought to 130° while 10.56 lbs. of ethylene oxide was added with stirring in 3 hrs. The pressure was maintained at 10-15 lb. and stirring was continued for 0.5 hr. after the addn. to give a theoretical mol. wt. of 2112. Data are given on the products obtained by use of various other amines and oxides. These materials may be used as emulsifying agents for oils, fats, and insecticides; as metal-cutting oils, as pickling and corrosion inhibitors; to inhibit the growth of algae or molds; as detergents or wetting agents; and as lubricant additives.

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